

**CALIFORNIA ENERGY COMMISSION**1516 NINTH STREET  
SACRAMENTO, CA 95814-5112

**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

**In the Matter of:****GATEWAY GENERATING STATION**

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**Docket No. 00-AFC-1C****Order No.**

**Pacific Gas and Electric Company  
Gateway Generating Station  
3225 Wilbur Ave.  
Antioch, CA 94509**

**ORDER APPROVING a Petition to Modify  
several Air Quality conditions to reflect  
the Bay Area Air Quality Management  
District current conditions and the  
Prevention of Significant Deterioration  
action.**

On April 4, 2011, Pacific Gas and Electric, the owner/operator of the Gateway Generating Station, submitted a petition requesting to modify several Air Quality conditions to reflect the Bay Area Air Quality Management District current conditions and the Prevention of Significant Deterioration enforcement action that has been resolved by a court ordered consent decree. This amendment will implement the consent decree conditions as adopted by the Federal Government in our Conditions of Certification as Consent Decree conditions. The Consent Decree conditions are more restrictive than the Best Available Control Technology determination in the original Energy Commission Decision from 2001 and the more restrictive Consent Decree conditions would need to be complied with in order for Gateway Generating Station to continue to comply with all laws, ordinances, regulations and standards.

The project would comply with the Second Amended Consent Decree entered by the United States District Court for the Northern District of California on March 3, 2011 in United States of America v. PG&E, 2011 U.S. Dist LEXIS 27022 (N.D. Cal March 3, 2011). Entry into the Consent Decree fully resolved PG&E's alleged non-compliance with the federal Prevention of Significant Deterioration requirements under the Clean Air Act.

**STAFF RECOMMENDATION**

Energy Commission staff reviewed the petition and finds that it complies with the requirements of Title 20, Section 1769(a) of the California Code of Regulations and

recommends approval of (the Project Owner) petition to modify the Gateway Generating Station and amend related Conditions of Certification.

## ENERGY COMMISSION FINDINGS

Based on staff's analysis, the Energy Commission concludes that the proposed changes will not result in any significant impact to public health and safety, or the environment. The Energy Commission finds that:

- The petition meets all the filing criteria of Title 20, section 1769(a) concerning post-certification project modifications;
- The modification would not change the findings in the Energy Commission's Final Decision pursuant to Title 20, section 1755;
- The project would remain in compliance with all applicable LORS, subject to the provisions of Public Resources Code section 25525;
- The change would be beneficial to the public by reducing NO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> emission limits; and
- There has been a substantial change in circumstances since the Energy Commission certification justifying the change and that the change is based on information that was not available to the parties prior to Energy Commission certification in that there was a large time gap between when the Energy Commission/Air District permit was issued and when the PSD permit was issued, such that some emission limits changed. The proposed amendment incorporates the more stringent emission limits from the PSD permit into the Energy Commission and Air District permit conditions.

## CONCLUSION AND ORDER

The California Energy Commission hereby adopts Staff's recommendations and approves the following changes to the Commission Decision for the Gateway Generating Station. New language is shown as **bold and underlined**, and deleted language is shown in ~~strikeout~~.

## CONDITIONS OF CERTIFICATION

### Definitions:

1-hour period:	Any continuous 60-minute period beginning on the hour.
Calendar Day:	Any continuous 24-hour period beginning at 12:00 AM or 0000 hours.
Year:	Any consecutive twelve-month period of time.
Heat Input:	All heat inputs refer to the heat input at the higher heating value <b><u>(HHV) of the</u></b> fuel, in Btu/scf.
Rolling 3-hour period:	Any three-hour period that begins on the hour and does not include start-up or shut down periods.

Firing Hours:	Period of time during which fuel is flowing to a unit, measured in fifteen-minute increments.
MM Btu:	million British thermal units
Gas Turbine Start-up Mode:	The lesser of the first 256 minutes of continuous fuel flow to the Gas Turbine after fuel flow is initiated or the period of time from Gas Turbine fuel flow initiation until the Gas Turbine achieves two consecutive CEM data points in compliance with the emission concentration limits of conditions 20(b) and 20(d).
Gas Turbine Shut-down mode:	The lesser of the 30 minute period immediately prior to the termination of fuel flow to the Gas Turbine or the period of time from non-compliance with any requirement listed in Conditions 20 (b) and 20(d) until termination of fuel flow to the Gas Turbine.
Specified PAHs:	<p>The polycyclic aromatic hydrocarbons listed below shall be considered to Specified PAHs for these permit conditions. Any emission limits for Specified PAHs refer to the sum of the emissions for all six of the following compounds.</p> <p>Benzo[a]anthracene  Benzo[b]fluoranthene  Benzo[k]fluoranthene  Benzo[a]pyrene  Dibenzo[a,h]anthracene  Indeno[1,2,3-cd]pyrene</p>
Corrected Concentration:	The concentration of any pollutant (generally NO <sub>x</sub> , CO, or NH <sub>3</sub> ) corrected to a standard stack gas oxygen concentration. For emission point P-11 (combined exhaust of S-41 Gas Turbine and S-42 HRSG duct burners) and emission point P-12 (combined exhaust of S-43 Gas Turbine and S-44 HRSG duct burners) the standard stack gas oxygen concentration is 15% O <sub>2</sub> by volume on a dry basis.
Commissioning Activities:	All testing, adjustment, tuning, and calibration activities recommended by the equipment manufacturers and the GGS construction contractor to insure safe and reliable steady state operation of the gas turbines, heat recovery steam generators, steam turbine, and associated electrical delivery systems.
Commissioning Period:	The Period shall commence when all mechanical, electrical, and control systems are installed and individual system start-up has been completed, or when a gas turbine is first fired, whichever occurs first. The period shall terminate when the plant has completed performance testing, and is available for commercial operation.
Precursor Organic Compounds (POCs):	Any compound of carbon, excluding methane, ethane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate.

CEC CPM:	California Energy Commission Compliance Program Manager
GGS:	Gateway Generating Station

### Conditions for the Commissioning Period

**AQ-1** The owner/operator of the GGS shall minimize emissions of carbon monoxide and nitrogen oxides from S-41 and S-43 Gas Turbines and S-42 and S-44 Heat Recovery Steam Generators (HRSGs) to the maximum extent possible during the commissioning period. Conditions AQ-1 through 12 shall only apply during the commissioning period as defined above. Unless otherwise indicated, Conditions AQ-13 through ~~44~~7 shall apply after the commissioning period has ended.

**Verification:** The owner/operator shall submit a monthly compliance report to the California Energy Commission (CEC) Compliance Project Manager (CPM). In this report the owner/operator shall indicate how this condition is being implemented.

**AQ-25** Toxic and HAP Emission Limits

**AQ-25.1.** The maximum projected annual toxic air contaminant emissions (per condition 28) from the Gas Turbines and HRSGs combined (S-41, S-42, S-43, and S-44) shall not exceed the following limits:

4,102 pounds of formaldehyde per year  
 506 pounds of benzene per year  
 38 pounds of specified polycyclic aromatic hydrocarbons (PAHs) per year

Unless the following requirement is satisfied:

The owner/operator shall perform a health risk assessment using the emission rates determined by source test and the most current Bay Area Air Quality Management District approved procedures and unit risk factors in effect at the time of the analysis. This risk analysis shall be submitted to the District and the CEC CPM within 60 days of the source test date. The owner/operator may request that the District and the CEC CPM revise the carcinogenic compound emission limits specified above. If the owner/operator demonstrates to the satisfaction of the APCO that these revised emission limits will result in a cancer risk of not more than 1.0 in one million, the District and the CEC CPM may, at their discretion, adjust the carcinogenic compound emission limits listed above. (TRMP)

**Verification:** Compliance with condition AQ-28 shall be deemed as compliance with this condition. In addition, approval by the District and the CEC CPM of the reports prepared for this condition will constitute a verification of compliance with this condition.

**AQ-25.2** The maximum projected annual Hazardous Air Pollutant (HAP) emissions from the Gas Turbines and HRSGs combined (S-41, S-42, S-43, and S-44) shall not exceed the following limit:

20,000 pounds of hexane per year  
(US-CAA, Section 112(g))

Conformance with this limit shall be verified by the source testing in AQ-32.

**Verification:** Compliance with condition AQ-28 shall be deemed as compliance with this condition. In addition, approval by the District and the CEC CPM of the reports prepared for this condition will constitute a verification of compliance with this condition.

**Additional Conditions from Approved Federal Consent Decree (Civil Action No. 09-4503 SI) Included by PG&E's Request**

**CD-1. The Gas Turbines (S-41 & S-43) and HRSGs (S-42 & S-44) shall comply with requirements (a) and (b) under all operating scenarios, including duct burner firing mode, except as specified in Condition CD-2.**

- a. The nitrogen oxide emission concentration at emission points P-11 and P-12 each shall not exceed 2.0 ppmv, on a dry basis, corrected to 15% O<sub>2</sub>, averaged over any 1-hour period.
- b. Particulate matter (PM<sub>10</sub>) mass emissions at P-11 and P-12 each shall not exceed 7.50 pounds per hour when the HRSG duct burners are not in operation. Particulate matter (PM<sub>10</sub>) mass emissions at P-11 and P-12 each shall not exceed 9.0 pounds per hour when the HRSG duct burners are in operation. Particulate matter (PM<sub>10</sub>) mass emissions at P-11 and P-12 each shall not exceed 0.004 lb/MMBtu of natural gas fired. (Basis: Voluntary-Consent Decree)

**CD-2. NO<sub>x</sub> emissions during Natural-Gas Combustion Turbine Start-up Mode and during Natural-Gas Combustion Turbine Shutdown Mode shall not be included in calculating compliance with the one-hour 2.0 ppmv NO<sub>x</sub> concentration emission limit set forth in Condition CD-1. Natural-Gas Combustion Turbine Start-up Mode is the lesser of the first 256 minutes of continuous fuel flow to the natural gas-fired combustion turbine after fuel flow is initiated or the period of time from natural gas-fired combustion turbine fuel flow initiation until the natural gas-fired combustion turbine achieves two consecutive continuous emission monitor data points in compliance with the 2.0 ppmv NO<sub>x</sub> emission concentration limit. Natural-Gas Combustion Turbine Shutdown Mode is the lesser of the 30 minute period immediately prior to the termination of fuel flow to the natural gas-fired combustion turbine or the period of time from noncompliance with the**

**2.0 ppmv NOx emission concentration limit until termination of fuel flow to the natural gas fired combustion turbine.**

**(Basis: Voluntary–Consent Decree)**

**CD-3. Cumulative combined emissions from the Gas Turbines and HRSGs (S-41, S-42, S-43, and S-44), including emissions generated during gas turbine start-ups and shutdowns, shall not exceed the following limits during any consecutive twelvemonth period:**

**a. 139.2 tons of NOx (as NO2) per year**

**b. 18.5 tons of SO2 per year**

**(Basis: Voluntary–Consent Decree)**

**CD-4. The Gas Turbines (S-41 and S-43) and HRSG Duct Burners (S-42 and S-44) shall be fired exclusively on natural gas with a maximum sulfur content no greater than 1 grain per 100 standard cubic feet.**

**(Basis: Voluntary–Consent Decree)**

**IT IS SO ORDERED.**

Date: \_\_\_\_\_

STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

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Robert Weisenmiller  
Chairman